# Tracking Ghosts:
# The future of covert officer safety

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The Command College Futures Study Project is a FUTURES study of a particular emerging issue of relevance to law enforcement. Its purpose is NOT to predict the future; rather, to project a variety of possible scenarios useful for strategic planning in anticipation of the emerging landscape facing policing organizations.

This journal article was created using the futures forecasting process of Command College and its outcomes. Defining the future differs from analyzing the past, because it has not yet happened. In this article, methodologies have been used to discern useful alternatives to enhance the success of planners and leaders in their response to a range of possible future environments.

Managing the future means influencing it—creating, constraining and adapting to emerging trends and events in a way that optimizes the opportunities and minimizes the threats of relevance to the profession.

The views and conclusions expressed in the Command College Futures Project and journal article are those of the author, and are not necessarily those of the CA Commission on Peace Officer Standards and Training (POST).

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A SUCCESSFUL SCENARIO, BUT IS IT TECHNOLOGICALLY POSSIBLE?

Following months of a jury trial, investigators sit around a conference room, debriefing and reminisce the successes and shortfalls of their investigation as they patiently await the words of the Jury's Foreman…guilty or innocent.

Looking back over their two year investigation, the group recalls the countless hours of surveillance conducted by local, state and federal investigators all over the country; the hundreds of hours of monitoring electronic surveillance operations such as listening in on wiretapped cellular and hard-line telephones, as well as the tracking suspected load vehicles from West Coast to East. Each recounts different parts of the investigation. One person cannot recount it all, because their efforts collectively brought this poly-drug manufacturing, smuggling and transportation organization to its knees. Their efforts spawned numerous investigations, within the United States and international locales. In Columbia, metric tons cocaine had been shipped; in Afghanistan, thousands of pounds of opium and heroin had been shipped, and Europe was the second major distribution destination for this drug trafficking organization.

Their collective efforts had not gone unnoticed by those who sit in lofty position in Washington D.C., from cabinet level positions in the Federal Bureau of Investigation, the Drug Enforcement Administration, and the Department of Homeland Security. Even the President of the United States boasted the successes of the investigation through a media briefing. He rightfully mentioned the significant impact to the war-on-terror these arrests and seizures had for the suspects linked to an international narco-terrorism organization whose profits directly linked to funding terrorism.

With all those successes, the team agreed that the single most valuable lesson learned was to *always* "deconflict" their investigations and field events by calling their regional Intelligence & Deconfliction Watch Center every time they conduct field operation, especially when they move operations to a new location. The team agreed that no amount of drugs, money or weapons seizures were worth the lives they almost lost in the final undercover operation conducted.

## DECONFLICTION - WHAT IS IT?

Before continuing with the story, let us hit the "pause" button and clarify, "What is deconfliction?" The term "deconfliction" is convergence avoidance, or simply put, ensuring the right hand knows what the left hand is doing. In the world of criminal investigations, the best-case scenario is not just avoiding a conflict between investigations, but rather investigative synchronization...merging multiple investigations into one to avoid a duplication of efforts thus increasing efficiency and hopefully effectiveness.

To best understand deconfliction and understand its evolution, one must travel back in time to see the progression of deconfliction as a philosophy and practice:

- In 1973, CNIN utilized a simplistic method of agencies submitting hand-written subject cards on their respective criminal activities to perform subject/case deconfliction. Typed Rolodex index cards were used to track the submitting agency and investigator's contact information. If authorized through their agency, vetted investigators would perform telephonic inquires into the information submitted, queries were logged manually for record. The information-sharing concept grew as more law enforcement agencies expressed interest to extend the range of intelligence across jurisdictional boundaries.

- On April 5, 1973, the California Narcotics Information Network (CNIN), was created and became an integral part of the Organized Crime and Criminal Intelligence Branch of the California Department of Justice. CNIN was established in order to promote the exchange of narcotic intelligence information by providing law enforcement agencies a central information repository of narcotics trafficking subjects operating within California. The premises of this central repository was not only to store intelligence information on criminals and their organizations, but it was also used to perform case/subject deconfliction; a pointer system that allowed for one investigator to be put in contact with another investigator if they both were working the same individual or organization (CNIN Statement of Organization, 1981).
- In 1974, the Regional Information Sharing System (RISS) Project formed. The RISS Project remains the only multijurisdictional criminal intelligence system operated by and for state and local law enforcement agencies. As the benefits of the RISS Project spread, encouragement for regionalization formed.
- In 1980, a regionalized CNIN concept was introduced to Congress and federal appropriations funding were allocated to grow the project.
- In 1981, CNIN was replaced by the Western States Information Network (WSIN), and was designated as one of ultimately six RISS Regions in the country. The WSIN Region would include the five western states of California, Oregon, Washington, Alaska and Hawaii. As the balance of the country regionalized, the Rocky Mountain Information Network (RMIN), the Mid-States Organized Crime Information Center (MOCIC), the Middle Atlantic-Great Lakes Organized Crime Law Enforcement

Network (MAGLOCLEN), the New England State Police Information Network (NESPIN), and the Regional Organized Crime Information Center (ROCIC) formed.

By the mid-1980s, case/deconfliction had become the norm in most criminal investigations within the WSIN footprint. As it caught on, investigators grew comfortable sharing their respective investigative information with others for the greater good. This spawned the concept of event-deconfliction beyond the specific case deconfliction strategies. The concept of event deconfliction is founded upon investigators calling into a central location, a deconfliction watch center, where originally large Thomas Bros pin-maps were posted on a wall.

As investigators performed common yet potentially hazardous investigative field tasks, such as covert surveillances and undercover stings, or tactical operations like warrant services or buy-busts, they would call into a watch center and ask to be "posted" on the pin-map just in case another investigator or team were conducting an operation at or near the same location. The watch center would write that information onto a piece of paper and literally pin the information at the coordinates given by the investigator. If a second investigator called in an event, whether directly linked to the first investigation or just within a relatively close proximity to the first, the watch center personnel would manually "deconflict" their operations or events by pointing one officer to the other through phone calls and the sharing of the investigator's contact information (i.e., telephone, pager number, etc.). The hope was that investigators would discuss their crossed investigations and come up with an amicable agreement as to how they would proceed, thus averting a potential "blue-on-blue" situation.

## THE ADVENT OF TECHNOLOGY IN DECONFLICTION

In 1990, federal and state grant funds became available to create advanced computer technologies for even better information sharing, as well as for event deconfliction to replace the

manual pin mapping. As the host and fiduciary agency for WSIN, the California Department of Justice in partnership with the agencies of the Los Angeles High Intensity Drug Trafficking Area, began working to develop what has become the California Statewide Investigative Networking System (SINS). SINS is a highly secure, rapid communications network that incorporates advanced technologies allowing for Geographic Mapping and Graphical Information, Photo and Document Imaging, Distributed Relational Databases, Data Encryption and Decryption.

The foundational system used within the SINS environment to promote information sharing, although renamed several times, the California State Intelligence Index (CSII). In 2006, the RISS Project rolled out its nationally available case/subject deconfliction intelligence system known as RISSIntel. Through automated interoperability, CSII, RISSIntel, and other linked systems now share case/subject investigative information between law enforcement agencies from coast-to-coast using the National Virtual Pointer System (NVPS).

To compliment information sharing in the SINS Environment, the Critical Event Geographic Mapping System (CEV/GEMS) was built for event deconfliction. The CEV/GEMS system was operationally used within the WSIN footprint for well over a decade until recently replaced through the rollout of the RISS Project's nationally available production version of RISSafe. RISSafe, modeled after the fundamentally battle-tested concepts of CEV/GEMS, coupled with advanced features of the Oregon Criminal Intelligence Network (OCIN) Event Deconfliction system, is truly a state of the art event deconfliction system. RISSafe, built upon extensible technologies, allows for growth, flexibility and change. However as advanced as RISSafe is, it still is missing a key component.

## STILL BEHIND THE EIGHTBALL

Today, within the WSIN footprint, intelligence records are maintained within multi-layered information sharing databases. These have evolved into some of the most sophisticated case/subject deconfliction and analytical software tools available in the country. Through either phone-in Watch Center queries, or highly secure internet based connectivity, WSIN members from all five western states have the ability to access secure intelligence data. Unquestionably, this connectivity is the most far-reaching technology ever developed for law enforcement officers to assist them in their daily investigation efforts; a far cry from the original Rolodex and index card system and law enforcement should be proud of its case/subject deconfliction technological accomplishments.

Conversely, as technologically evolved as law enforcement event deconfliction has become, to include the end-user "Point-and-Click" self posting capabilities with the latest release of RISSafe, albeit sophisticated, fundamentally law enforcement event deconfliction is still just an electronic pin mapping system; a system totally reliant on investigators to take the time to post their locations each and every time they move. In the world of event deconfliction, law enforcement is still behind-the-eight ball.

With the available Global Positioning System (GPS) technologies, one would think public safety software engineers would have already taken advantage of the open market solutions to better the existing Computer Aided Dispatch (CAD) systems for event deconfliction systems in support deconfliction strategies. Was there a need or desire, though, to advance such technologies? This question was answered on February 7, 2008, when the Association of Public-Safety Communications Officials (APCO) and Motorola released their findings of a national survey to assess how public safety organizations use current communications technology and

what future capabilities they would deploy to help improve emergency response, officer effectiveness and public and officer safety. Key survey findings reveal a strong demand for technology solutions that provide advanced situational awareness.

## LAW ENFORCEMENT TECHNOLOGIES STILL LACKING

Community officials in both large and small populations listed mapping technologies, or GPS tracking, as the top tool they would hope to see utilized as technology continues to evolve in the security and safety arena (News Report, 2008). In the early days of Computer Aided Dispatch (CAD) technologies, a GPS devices was mounted in the trunk of each patrol vehicle. The device transmitted each patrol vehicle's location to antennas installed throughout the city or county. In these early days, patrol officers jokingly called this technology as the 'sergeant in the trunk.' As technologies have advanced, old and simple CAD systems have since been replaced by technologies capable of automatically dispatching patrol units through the GPS interface, the "9-1-1" emergency operator and the patrol vehicle's less sophisticated Mobile Digital Terminal (MDT) or more sophisticated Mobile Computer Terminal (MCT) as proven by TriTech Software Systems.

On December 4, 2006, TriTech (a leader in public safety software for law enforcement, fire and Emergency Medical Services (EMS) agencies), in partnership with Bradshaw Consulting Services, Inc. (BCS), a provider of total Geographic Information System (GIS) solutions to government clients throughout the world, merged Enhanced GIS Resource Planning and Spatial Analysis capabilities for public safety agencies. Through this strategic partnership, TriTech was able to provide BCS' Mobile Area Routing and Vehicle Location Information System™ (MARVLIS), Crime Analysis Tools™ (CAT), and Fire Analysis Tools™ (FAT) as an integrated part of TriTech's comprehensive solution to prospective and current public safety agencies.

These solutions will empower communications centers, law enforcement, fire and emergency medical service agencies with historical and real-time information to efficiently allocate resources and analyze crime/fire trends and calls for service (Clavero, 2006).

As sophisticated as even these systems are, they were conceived through the eyes of deployment efficiency and reporting effectiveness experts and not upon *officer safety* and event deconfliction. So the question remains, does any solution exist, for law enforcement or otherwise? The answer is yes. Although not specifically designed for law enforcement, one such event deconfliction system has been built, however not for law enforcement.

## MILITARY FORCE TRACKING TECHNOLOGIES

Following the first Gulf War in February 1991, journalists asked military coalition force leaders to share war success stories from this decisive victory. One of the most common successes laid out was the military coalition leader having the ability to know where their forces were in the combat theater at any given time. Reviewing spy plane photography and piping satellite imagery into a battlefield Tactical Operation Center (TOC) was not a new concept so few journalists pursued what the commanders actually meant. The part of the equation that was not shared or at least widely publicized for some time was the military's ability to not only view this static information within a TOC environment, but they now had the ability to view real-time positioning of their troops at any given moment. By doing so, the coalition forces were able to track each other and almost eliminate "friendly fire" incidences (i.e., friendly fire also known as non-hostile fire is a term used by the United States military in describing fire from allied forces as opposed to fire coming from enemy forces or enemy fire).

Although some technologies remain classified, one such unclassified military personnel tracking system is Blue Force Tracking. General Dynamics' publicly accessible website

rightfully boasts the following: "General Dynamics creates and integrates Blue Force Tracking (BFT) and situational awareness capabilities into products and systems that identify and track "friendly forces," cutting through the fog of war to save lives. These systems can form a tiered architecture using ground, airborne, over-the-horizon (OTH) relay, and national asset segments to prevent fratricide, track valuable military assets, provide emergency communication, exfiltrate data from sensor systems, and allow search and rescue forces to quickly locate, identify, and communicate with at-risk personnel.

General Dynamics C4 Systems, to include Blue Force Tracking, enables its customers to observe and orient within their environments - collecting, disseminating and delivering critical information with speed and precision - through world-class Intelligence, Surveillance and Reconnaissance (ISR) solutions. Whether an operations center on the ground or an asset based in space, our ISR systems are built to integrate information from terrestrial, maritime, and space-borne sensors and display it in comprehensive pictures for decision-makers worldwide. General Dynamics C4 Systems integrates Blue Force Tracking (BFT) and situational awareness capabilities into systems that identify and track 'friendlies' and assets, helping to save lives. General Dynamics also produces small, mobile ISR workstations for use in Joint Operations Centers (JOC). General Dynamics also develop ISR solutions incorporating electronic surveillance and advanced electronic attack capabilities to help commanders see, identify, track and jam enemy emitters. Through systems like these, General Dynamics' customers can locate threats with speed and precision, and act decisively (Blue Force Tracking, 2008). In the future, those customers could include civilian law enforcement agencies seeking solutions to their event deconfliction needs.

The next challenge for public safety software designers is to adapt existing case/subject deconfliction systems available to law enforcement, such as what CSII and RISSIntel provide. Couple this with static map event deconfliction systems that are currently available, such as RISSafe. Then incorporate live Force Tracking GPS technologies to the mix in order to create the best of all worlds for individual agency CAD driven communication centers and regional Intelligence & Deconfliction Watch Centers alike. One might ask, is it really needed though, is it really worth it?

## GETTING BACK TO OUR STORY

As their collective memories digress back to the day of their final takedown, our investigators joked about the clamor to be on the arrest team. To see the faces of those they had been hunting for so long, at the moment they are taken into custody, is priceless to an investigator. As the decisions were made and each donned their tactioal dress uniforms, body armor and weaponry, they refined their orders and bantered over who was going to be the first to jump from their arrest vehicle. As the team collectively climbed into their van, they clipped on and holstered their cellular telephones ensuring each phone's GPS tracking capabilities was activated; their life link, per se, to the Intelligence & Deconfliction Watch Center more commonly referred to as "The War Room." This was the implementation of the vision to blend CAD systems, geo-mapping and General Dynamics C4 type technologies into a comprehensive event deconfliction system for each of the various vice, narcotics, anti-terrorism and street enforcement teams operating in the region. As so often occurs, their team had the usual issues with work overlapping that of others. Unlike the past, the overlap did not present the potential for a "blue-on-blue" / cop-on-cop encounter.

Hours earlier, the lead investigator of this final operation called the War Room at a 1-800 number all investigators were educated to call. After verifying the identity of the investigator, the War Room intelligence analyst who answered the phone entered routine information the investigators provide; the date, time and location the investigator anticipated conducting their undercover operation, the type of operation conducted.

With the new live GPS Force Tracking software available to the War Room, the intelligence analyst asked for the team members individual GPS ready telephone numbers then quickly converted into individual live GPS identification codes that allowed the geo-mapping software to track them. As each of the tactical team operator's information was added to the system, their icons appear on a second computer monitor on the analyst's desk as well as simultaneously appear on a large tactical visualization display wall within the War Room. With all the locations provided by the investigator plotted and grouped, the system automatically placed a 1,000-yard electronic geo-fence around the collective tactical operator team, a geo-bubble as it were.

The investigators relived their final operation. Not only did the meet times and locations change on the fly, so did investigator responsibilities. Somehow, as those responsibilities transitioned, no one remembered to call the War Room and update their activities, times, locations. In essence, from an event deconfliction standpoint, they were flying blind.

As the operation unfolded, the surveillance and arrest teams drove toward the newly agreed upon meet location, decided upon by the undercover operatives. However, as they neared the location, simultaneously all the investor's cell phones began to vibrate. Each looked at their cell phone text message screens and saw ***"WARNING – OPERATIONAL CONFLICT ALERT. CALL THE INTELLIGENCE & DECONFLICTION WATCH CENTER IMMEDIATELY***

***AT 1-800-WARROOM.*"** While some were still checking their cell phones, War Room intelligence analysts were calling their phones individually, personally notifying them of the operational conflict.

As luck would have it, these investigators had stumbled upon an Anti-Terrorism Task Force (ATTF) investigation. Unbeknownst to the undercover operatives, the teams had been negotiating against one another and none of the information entered within the subject/case deconfliction database ever matched. Then, to make matters worse, both teams failed to notify the War Room of the new meet location. Neither team was aware they were moments away from doing battle with each other...going "blue-on-blue!" If it were not for this new law enforcement live Force Tracking GPS technology, a life threatening blue-on-blue scenario would have erupted and lives could have been lost.

Although such live Force Tracking GPS systems have yet to be designed specifically for law enforcement, the foundational technologies do exist. With potential blue-on-blue scenarios occurring far more frequently than law enforcement officials care to admit, we can no longer ignore these potentially lifesaving technologies and must assess the suitability of emerging civilian and military technologies to help save lives and fulfill our mandate to protect the public.

CAN WE AFFORD TO? BETTER QUESTION, CAN WE AFFORD NOT TO?

The direct affect of these technologies to law enforcement, more specifically undercover, surveillance and tactical operations, would undoubtedly increase *officer safety*...would undoubtedly save lives. However to create and implement such technologies means change; not only a line-item budgetary shift to fund such developments, but more significantly a paradigm shift from current field practices and methodologies. To make this technological leap, law

enforcement organizations must be willing to support such technologies, adapt to such new concepts, and embrace such change.

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